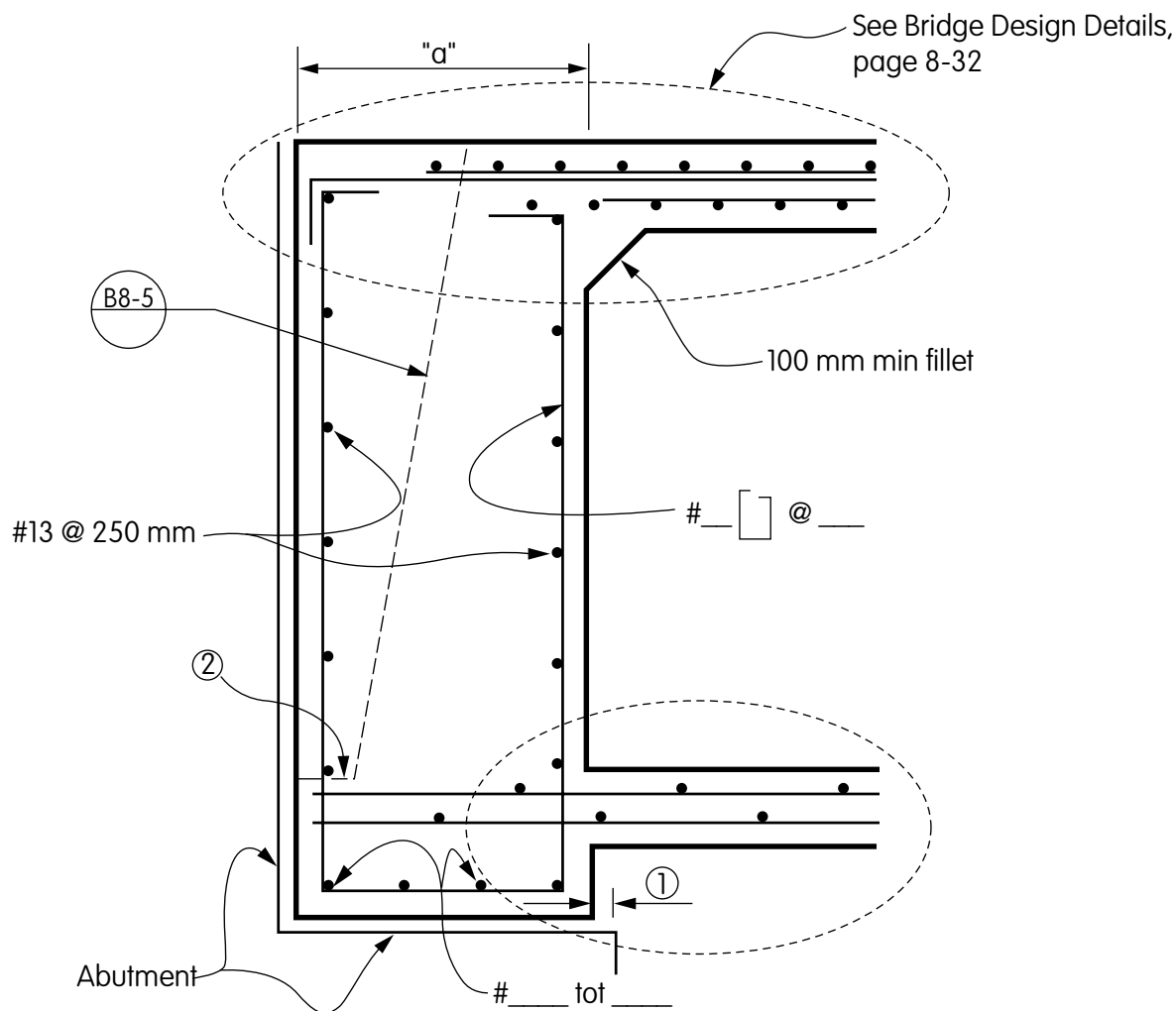


# Box Girder Diaphragm for CIP Prestressed Girder B8-5



**Notes:**

Inset diaphragm \_\_\_\_ mm to allow for prestress shortening.

Bottom of blockout should be located at or above the top surface of the bottom slab.

Diaphragm > 40° skew illustrated.

## Recommended Diaphragm Dimensions

Skew (Degrees)	Minimum Dimension "a" at Abutment	At Hinge
0 - 14	900	800
15 - 29	1100	1000
30 - 44	1300	1200
45 - 55	1500	1400

## Box Girder Cell Access

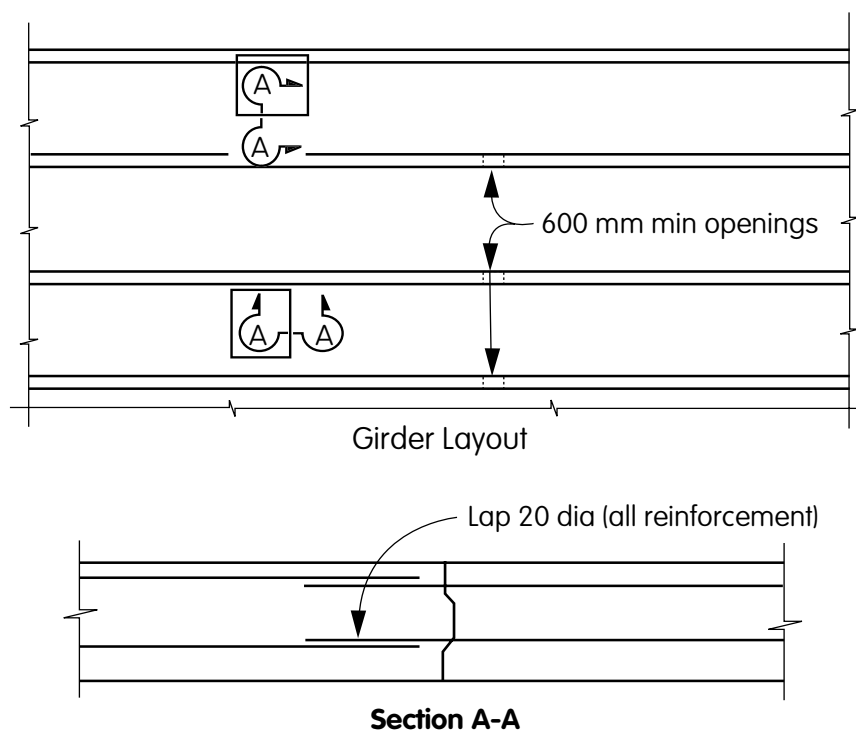
In post-tensioned concrete box girder bridges with tendons exposed in the cells, it is necessary to provide access to all cells to permit removal of deck forms and also for future inspection of the tendons.

A minimum of two manholes per span should be provided for future access. This may be reduced for multi-span structures. Manholes are usually located in shoulders or sidewalks, but access openings in the bottom slab are permissible. Openings in diaphragms and webs should be as large as possible.

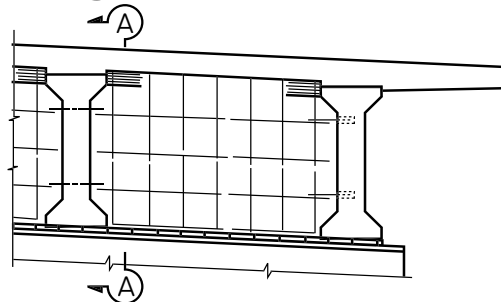
Temporary openings in the top or bottom slab shall be permitted for removal of deck forms. Openings in the top slab are preferred. Location and maximum size shall be shown and indicated as optional for the contractor. If possible, form lumber should not have to be moved through more than 2 openings in diaphragms or webs.

Permanently left-in-place galvanized, corrugated steel forms are an acceptable alternative.

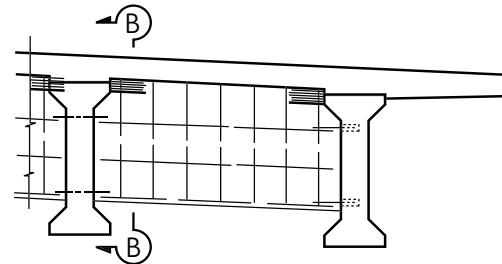
1250 mm x 1250 mm temporary openings will be permitted in top or bottom slab, where indicated, at contractor's option.



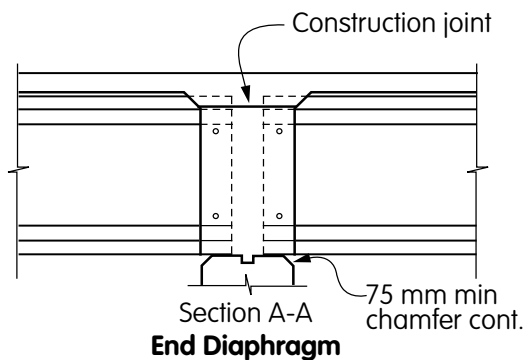
# Diaphragm Details for Precast Girders



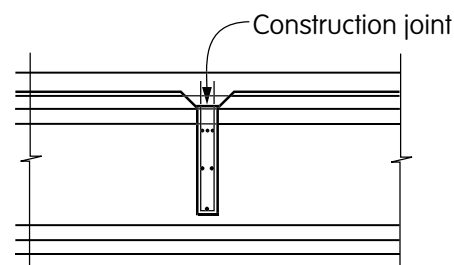
Elevation



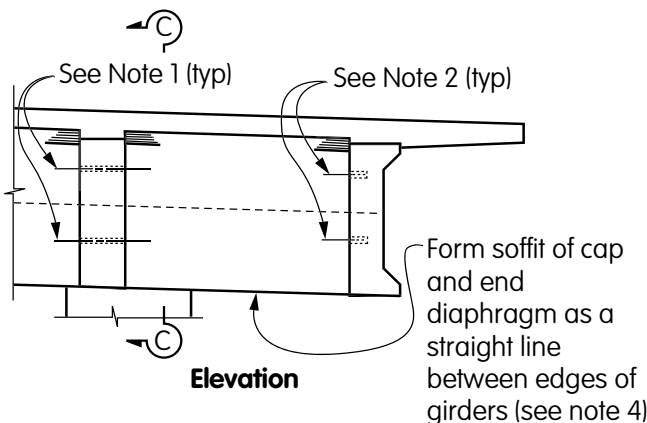
Elevation



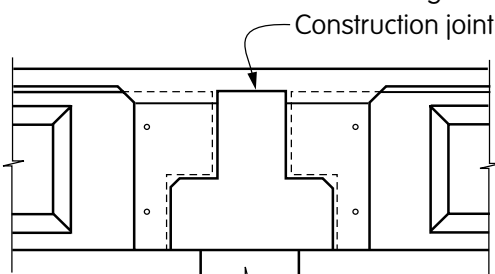
Section A-A  
End Diaphragm



Section B-B  
Intermediate Diaphragm



Elevation



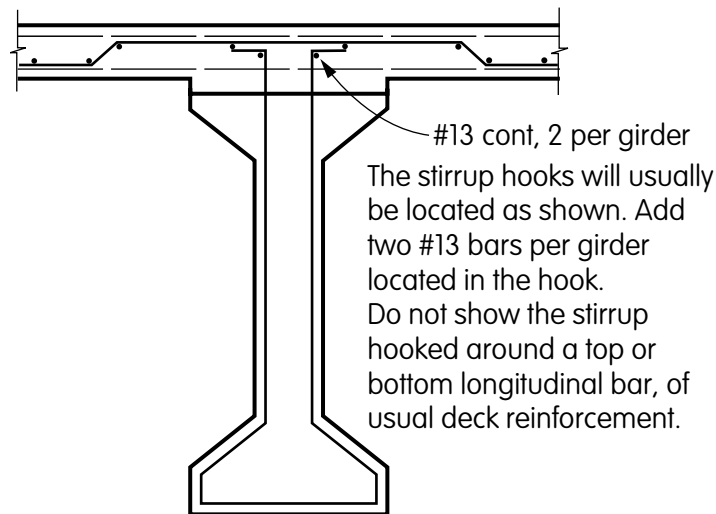
Section C-C  
End Diaphragm

## Notes

1. #25 x 1200 mm dowels placed through 37.5 mm dia hole formed in girder, when diaphragms are continuous. Hole need not be grouted.
2. 25 mm dia bolts x 400 mm with insert assemblies when diaphragms are discontinuous. Bolts required for exterior girder.
3. Intermediate and end diaphragms are to be placed 5 days before placing deck. This note appears on Std. Plan B0-5.
4. This note clarifies forming so as to prevent spalling problems of thin unreinforced concrete under girders.

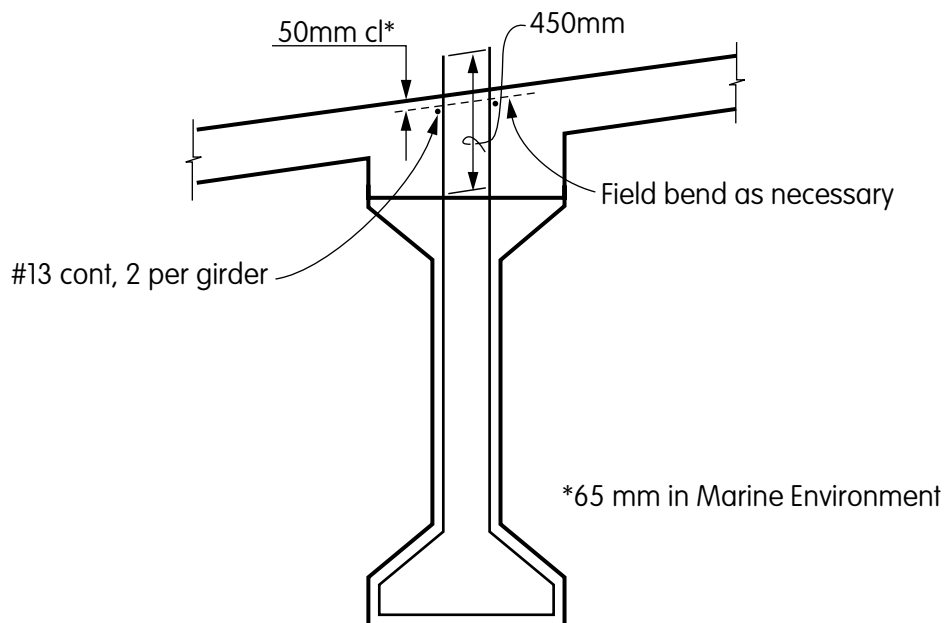
## Stirrup Anchorage for Precast Girders

Girder stirrups should extend 75 mm into the deck and be hooked around a longitudinal bar. The designer will determine if Case A or B is needed. If Case B is needed for part of a structure, it is to be used for the entire structure, and the Standard Sheet changed accordingly.



**Case A**

Normally used



**Case B**

Use where fillet will theoretically exceed 50 mm at center of girder.

## Welded Wire Fabric in Decks

The use of welded wire fabric should be considered in detailing precast and precast-prestressed tees, channels, boxes, etc., where the deck reinforcement is relatively light and bending is minimal.

## Precast Box Girders

